

## PLAGIARISM CERTIFICATE

URKUND

### Urkund Analysis Result

**Analysed Document:** Study of butterfly diversity of Amchang Wildlife Sanctuary.docx (D29710698)  
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**Submitted By:** shyamantalis@gmail.com  
**Significance:** 6 %

#### Sources included in the report:

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#### Instances where selected sources appear:

1998 and Kocher et al., 2000). Butterflies have been able to flourish on land, in tropical forest, deserts and grassy land mass and hundreds of species, representing of almost every family, live in every available ecological niche (Ambrose, 2005). 1.2 Butterflies as study materials The diversity of insects has been emphasized in many studies owing to their dominance in the terrestrial and aquatic ecosystems and provision of ecosystem services.

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such as pollination, pest control, nutrient decomposition, and maintenance of ecosystem species (Losey and Vaughan 2005). The

well-known groups of butterflies in particular, have often been advocated as useful indicators of environmental changes (Daily and Ehrlich, 1995; Hill et al., 1995; Hill and Hamer, 1998). However more than 90% of the known species are moths and the majority of them are nocturnal (Scoble, 1992; Young, 1997). Among insects, butterflies perform prominent roles in pollination (Kunze, 2000; Tiple et al., 2004) bearing a history of long-term co evolution with plants (Ehrlich and Raven, 1964). Butterflies are considered as good indicators of the health of any specified terrestrial ecosystem (New, 1991; Pollard and Yates, 1993; Kunze, 2000; Aluri and Rao, 2002; Thomas, 2005; Bonetbreke et al., 2010) as well as of human disturbance and habitat feature.

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Kunze et al., 1999; Kocher and Williams, 2000; Kunze, 2000; Sumnerville and Crist, 2001).

to a rich diversity of butterflies and other insects, due to vegetative richness (Aitred et al., 2002; Majumdar et al., 2011) and it is also globally recognized as a biodiversity hotspots. North-Eastern region of India is a hotspot of butterfly diversity (Evans, 1932). Large scale habitat deforestation and fragmentation has led to the decline of several butterfly population in the state. Very scanty

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works have been done on butterfly species diversity, species composition and its distribution patterns in North Eastern Region.

SBG surveys conducted by experts time to time in this region to explore the butterfly diversity (Talbot, 1939, 1947; Wyder-Blyth, 1967; Saharia, 1967; Varshney & Chanda, 1971). Talbot (1939, 1947) and Evans (1932) have studied the taxonomy and identification of butterflies in the North Eastern Region and its adjoining areas during the early parts of the twentieth century. Bhattacharjee (1995)

0: [http://www.researchtrend.net/strjstrjbr/VOL%203\(3\)%202014/16%20JHBR\\_4\(2\)%20\\_2015.pdf](http://www.researchtrend.net/strjstrjbr/VOL%203(3)%202014/16%20JHBR_4(2)%20_2015.pdf)

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also studied the taxonomy and distribution of Nymphalidae, Pieridae and Lycaenidae butterflies in the North Eastern region of India and its adjoining areas during the early parts of 20th century. Varshney and Chanda (1971) has compiled a report on butterflies of North Eastern India from the Museum specimen collected during 1955-1963.

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